Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Lab Portfolio Web Page Project**

Mrs. Krouse (Ms. Ottolini), AP Biology, 2014-2015

**Project Description:** For this project, you will be creating an online laboratory portfolio to demonstrate your knowledge of the experiments we complete after the AP Test.

**Grade Type:** Final Exam (10% of your year grade)

**Due Date:** The due date will be different for underclassmen and seniors, as final exams are scheduled for different dates. However, all experiments will be completed in plenty of time for both the underclassmen and senior due dates. Students MUST attend class on the due date.

1. Senior Due Date: Friday, June 5th (1st and 6th Periods) / Monday, June 8th (3rd Period) / Tuesday, June 9th (2nd Period)
2. Underclassmen Due Date: Monday, June 15th (2nd and 6th Periods) / Tuesday, June 16th (3rd Period) / Thursday, June 18th (1st Period)

**Exempt Students:** Junior and senior students who have an “A” average (90% or above) for the year are exempt from the final exam. These students do not need to attend the final exam date but are required to attend at least two of the final exam labs to assist with data collection.

**Web Page Details:** You can access your web page by typing in the following URL address: <http://students.weebly.com> . Your teacher will provide you with a username and password in class to sign in to your personal page. Follow the simple set-up of the Weebly website creation tools to personalize your web page.

**Exam Submission:** As the creator of the class Weebly account, your teacher has access to your web pages. Therefore, you will not have to “submit” any work on paper. Instead, I will login to your page and grade the material that is present on your page on the due date.

**After AP Test Calendar:**

|  |  |  |
| --- | --- | --- |
| **Date** | **Period / Time** | **Class Plan** |
| Monday, May 18th | 1st Period- 9:21-10:34 | 1st Period -  Project Rubric Distributed  Web Page Usernames and Passwords Distributed  Discuss methods and data organization for the Enzyme Lab |
| Tuesday, May 19th | 6th Period- 7:30-9:15 and 10:40-12:50 with 1st lunch  2nd Period- 12:56-2:10 | 6th Period  7:30-9:15  Project Rubric Distributed  Web page Usernames and Passwords Distributed  Enzyme Lab  10:40-12:50  Revise methods and complete Enzyme Lab again OR  Complete the first lab write-up  2nd Period  Project Rubric Distributed  Web page Usernames and Passwords Distributed  Discuss methods and data organization for the Enzyme Lab |
| Wednesday, May 20th | 3rd Period- 9:21-10:34  1st Period- 12:56-2:10 | 3rd Period  Project Rubric Distributed  Web page Usernames and Passwords Distributed  Discuss methods and data organization for the Enzyme Lab  1st Period  Begin Enzyme Lab |
| Thursday, May 21st | Normal schedule for 1st, 2nd, and 6th periods | 1st Period  Complete the Enzyme Lab  2nd Period  Enzyme Lab  6th Period  Complete the first lab write-up and peer evaluate |
| Friday, May 22nd | Normal schedule for 1st and 3rd periods | 1st Period  Complete the first lab write-up and peer evaluate  3rd Period  Enzyme Lab |
| Monday, May 25th | NO SCHOOL (Memorial Day Holiday) | N/A |
| Tuesday, May 26th | 1st, 2nd, and 6th Period | Potato Osmosis Lab |
| Wednesday, May 27th | 1st and 3rd Period | Potato Osmosis Lab |
| Thursday, May 28th | 1st, 2nd, and 6th Period | Cellular Respiration Lab |
| Friday, May 29th | 1st and 3rd Period | Cellular Respiration Lab |
| Monday, June 1st | 1st, 2nd, and 6th Period | Animal Behavior Lab – Pick your own variable to test! |
| Tuesday, June 2nd | 1st and 3rd Period | Animal Behavior Lab – Pick your own variable to test! |
| Wednesday, June 3rd | 1st, 2nd, and 6th Period | Set up pGLO Lab  (NOT part of the Final Exam Project) |
| Thursday, June 4th | 1st and 3rd Period | Set up pGLO Lab  (NOT part of the Final Exam Project) |
| Friday, June 5th | 1st Period – 7:30-9:03 (Senior Exam Period)  2nd Period – 9:09-10:15  6th Period – 12:37-2:10 (Senior Exam Period) | Analyze results from pGLO Lab  (NOT part of the Final Exam Project)  Time for Underclassmen to work on Online Lab Portfolio |
| Monday, June 8th | 3rd Period – 7:30-9:03 (Senior Exam Period)  1st Period – 1:05-2:10 | Analyze results from pGLO Lab  (NOT part of the Final Exam Project)  Time for Underclassmen to work on Online Lab Portfolio |
| Tuesday, June 9th | 2nd Period – 7:30-9:03 (Senior Exam Period)  6th Period – 10:49-12:59  1st Period – 1:05-2:10 | Time for Underclassmen to work on Online Lab Portfolio |
| Wednesday, June 10th | *Seniors dismissed at 9:05*  3rd Period – 9:09-10:23  1st Period – 12:45-2:10 | Time for Underclassmen to work on Online Lab Portfolio |
| Thursday, June 11th | Normal schedule for 1st, 2nd, and 6th periods | Time for Underclassmen to work on Online Lab Portfolio |
| Friday, June 12th | Normal schedule for 1st and 3rd periods | Time for Underclassmen to work on Online Lab Portfolio |
| Monday, June 15th | 2nd Period – 7:30-9:25 (Underclassmen Exam Period)  1st Period – 9:30-10:10  6th Period – 12:15-2:10  (Underclassmen Exam Period) | 2nd Period  TBD  1st Period  TBD  6th Period  TBD |
| Tuesday, June 16th | 3rd Period – 7:30-9:25  (Underclassmen Exam Period)  *Students dismissed at 11:30* | 3rd Period  TBD |
| Thursday, June 18th | 1st Period – 7:30-10:00  *Students dismissed at 10:00* | 1st Period  TBD |

**Requirements:**

1. You are required to complete a lab summary for three of the four experiments we complete in class. You can choose the experiments for which you complete a summary. When designing your web page, you should make one main page connecting all three labs to content from the units we studied in class and then three tabs where you include a summary of the purpose, hypothesis, methods, results, and discussion / conclusion for each experiment. Ms. Ottolini will show you a sample web page in class.
2. For each experiment you must include the following information on your web page:

* Connection to Class Content: In this section, you must thoroughly and accurately connect the purpose, hypothesis, methods, or results of the experiment to one or more of the units we studied in class. You must connect the experiment to at least three vocabulary terms or concepts from that unit.

*\*\*\*Note: For the Animal Behavior Lab, you will connect the lab to class content by discussing why/how we have used the Chi square test in this lab. You will also discuss why/how we used the Chi square test in another context in class (ex: for Hardy Weinberg Equilibrium or Punnett squares). You must use the terms critical value, Chi square value, and null hypothesis as the three vocabulary terms in your explanation\*\*\**

* Purpose: In this section, you must clearly state the purpose of the experiment in the following format… “The purpose of this experiment was to determine the effect of \_\_\_\_\_\_\_ (the independent variable) on \_\_\_\_\_\_\_\_ (the dependent variable).”
* Hypothesis: In this section, you must clearly state the hypothesis of the experiment in the following format… “If the \_\_\_\_\_\_ (the independent variable) is changed in \_\_\_\_\_\_ way, then the \_\_\_\_\_\_\_ (the dependent variable) will change in \_\_\_\_\_\_\_ way.”
* Methods Summary Chart: In this section, you will create and complete an experimental design chart that includes all the elements from the chart given below. When completing the chart, your answers in the right-hand column should be in complete sentences.

|  |  |
| --- | --- |
| Independent Variable |  |
| Levels of the Independent Variable (if applicable) |  |
| Dependent Variable |  |
| Method for Measuring Changes in the Dependent Variable |  |
| Control Group (if applicable) |  |
| Constants (factors that stay the same between your control group and your experimental groups) |  |
| Number of Trials |  |

* Results: In the section you will include a chart and/or graph that organizes the data you collected in the experiment. In class, we will discuss the type of chart and/or graph that is appropriate for each experiment.
* Discussion / Conclusion: In this section, you must include the following requirements…

1. A summary of the trends in the data
2. An explanation of whether the data supports or refutes the hypothesis
3. A discussion of two potential errors in the methods that could cause inaccuracies in the data AND suggestions for changes in the methods that could eliminate these errors

**Rubric:** You will be evaluated using the following criteria.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **Meets**  **Expectations** | **Approaches Expectations** | **Does Not Meet Expectations** | **Points**  **Lab 1** | **Points Lab 2** | **Points**  **Lab 3** | **Total Points** |
| Connection to a Unit of Study | You have thoroughly and accurately connected the purpose / methods of the experiment to one of our units, citing at least three vocabulary terms or concepts from that unit.  (5 points) | Your connections to the unit of study are either inaccurate, lack detail, OR you have included less than three.  (3-4 points) | Your connections to the unit of study are inaccurate, lack detail, AND you have included less than three.  (1-2 points) | /5 | /5 | /5 | /15 |
| Purpose | The purpose of the experiment is clearly stated/formatted. Both your independent and dependent variable are correct.  (3 points) | The purpose of the experiment is either unclearly stated/formatted OR your independent and/or dependent variable are incorrect.  (2 points) | The purpose of the experiment is unclearly stated / formatted AND your independent variable and/or dependent variable are incorrect.  (1 point) | /3 | /3 | /3 | /9 |
| Hypothesis | Your hypothesis is clearly stated/ formatted. There is a thorough and accurate explanation for your prediction that connects to the content learned in the unit.  (3 points) | Your hypothesis is either unclearly stated / formatted OR your explanation lacks detail / accuracy.  (2 points) | Your hypothesis is unclearly stated / formatted AND your explanation lacks detail / accuracy.  (1 point) | /3 | /3 | /3 | /9 |
| Methods Summary Chart | All elements from your summary chart are recorded thoroughly and accurately.  (5 points) | Most elements from your summary chart are recorded thoroughly and accurately, but some are incorrect or missing detail.  (3-4 points) | Most elements from your summary chart are incorrect or missing detail.  (1-2 points) | /5 | /5 | /5 | /15 |
| Results | Your chart and/or graph has an appropriate title, correct labels (with units), and logical organization of data points.  (3 points) | Your chart and/or graph is missing one of the following elements: an appropriate title, correct labels (with units), and logical organization of data points.  (2 points) | Your chart and/or graph is missing two or three of the following elements: an appropriate title, correct labels (with units) and logical organization of data points.  (1 point) | /3 | /3 | /3 | /9 |
| Discussion / Conclusion | Your discussion / conclusion section thoroughly and accurately meets each of the criteria listed in the “requirements” section of this document.  (5 points) | Your discussion / conclusion section is missing some of the criteria or some criteria lack detail / accuracy.  (3-4 points) | Your discussion / conclusion section is missing most of the criteria or most criteria lack detail / accuracy.  (1-2 points) | /5 | /5 | /5 | /15 |
| Professional Appearance of Web Site | Website is well organized / formatted to meet the other requirements and is professional in appearance  (5 points) | Website is slightly disorganized / formatted but still maintains a professional appearance  (3-4 points) | Website is poorly organized and contains spelling / grammar errors ; does not maintain a professional appearance  (1-2 points) | /5 | | | |

**Total: \_\_\_\_\_\_\_ / 77**